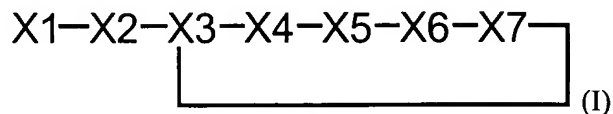


Claims

1. A compound, preferably a C5a receptor antagonist, with the following structure:



, whereby

X1 is a radical having a mass of about 1-300 and whereby X1 is preferably chosen from the group including R5-, R5-CO-, R5-N(R6)-CO-, R5-O-CO-, R5-SO₂-, R5-N(R6)-SO₂-, R5-N(R6)-, R5-N(R6)-CS-, R5-N(R6)-C(NH)-, R5-CS-, R5-P(O)OH-, R5-B(OH)-, R5-CH=N-O-CH₂-CO-, in which R5 and R6 individually and independently are chosen from the group comprising H, F, hydroxy, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, arylalkyl, substituted arylalkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, acyl, substituted acyl, alkoxy, alkoxyalkyl, substituted alkoxyalkyl, aryloxyalkyl and substituted aryloxyalkyl,

X2 is a radical that mimics the biologic binding characteristics of a phenylalanine unit,

X3 and X4 individually and independently are a spacer, whereby the spacer is preferably selected from the group comprising amino acids, amino acid analogs and amino acid derivatives,

X5 is a radical that mimics the biologic binding characteristics of a cyclohexylalanine or homoleucine unit,

X6 is a radical that mimics the biologic binding characteristics of a tryptophane unit,

X7 is a radical that mimics the biologic binding characteristics of a norleucine or phenylalanine unit,

a chemical bond is formed between X3 and X7, and

the lines – in formula (I) indicate chemical bonds, whereby the chemical bond individually and independently is selected from the group comprising covalent bonds, ionic bonds and coordinative bonds, whereby preferably the bond is a chemical bond and more preferably the chemical bond is a bond selected from the group comprising amide bonds, disulfide bonds, ether bonds, thioether bonds, oxime bonds and aminotriazine bonds.

2. The compound according to claim 1, characterized in that X3 and X7 are individually an amino acid, amino acid analog or amino acid derivative, whereby the chemical bond between X3 and X7 is formed under participation of at least one moiety of X3 and X7, and the moieties for X3 and X7 are individually and independently selected from the group comprising the C terminus, the N terminus and the respective side chain of the amino acid.

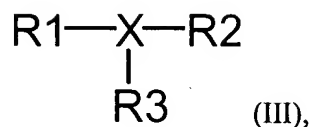
3. The compound according to claim 1 or 2, wherein

X1 is a radical with a mass of about 1-300, whereby the radical is preferably selected from the group comprising R5, R5-CO-, R5-N(R6)-CO-, R5-O-CO-, R5-SO₂-, R5-N(R6)-C(NH)-, whereby R5 and R6 are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl and substituted aryl;

X2 and X6 are individually and independently an aromatic amino acid, a derivative or an analogon thereof;

X5 and X7 are individually and independently a hydrophobic amino acid, a derivative or an analogon thereof.

4. The compound according to any of claims 1 to 3, whereby X2, X5, X6 and X7 individually and independently have the following structure:



wherein

X is C(R4) or N,

R1 is optionally present and if present then R1 is a radical, that is selected from the group comprising >N-R1B, >C(R1B)(R1D) and >O, whereby R1B and R1D are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, cycloalkylalkyl and substituted cycloalkylalkyl;

R2 is optionally present and if R2 is present then R2 is a radical that is selected from the group comprising >C=O, >C=S, >SO₂, >S=O, >C=NH, >C=N-CN, >PO(OH), >B(OH), >CH₂, >CH₂CO, >CHF and >CF₂;

R4 is a radical, whereby the radical is selected from the group comprising H, F, CH₃, CF₃, alkyl and substituted alkyl;

the binding of structure (III) to the moieties X1 and X3, X4 and X6, X5 and X7, and X6 and X3 is preferably carried out via R1 and R2;

for X2 and for X6 individually and independently R3 is a radical, in which the radical comprises an aromatic group and is selected from the group comprising aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl, substituted heteroarylalkyl, alkyloxy-alkyl, substituted alkyloxy-alkyl, alkyloxy-cycloalkyl, substituted alkyloxy-cycloalkyl, alkyloxy-heterocyclyl, substituted alkyloxy-heterocyclyl, alkyloxy-aryl, substituted alkyloxy-aryl, alkyloxy-heteroaryl, substituted alkyloxy-heteroaryl, alkylthio-alkyl, substituted alkylthio-alkyl, alkylthio-cycloalkyl and substituted alkylthio-cycloalkyl; and

for X5 and for X7 individually and independently R3 is a radical, whereby the radical comprises an aliphatic or aromatic group and preferably is selected from the group comprising alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl, substituted heteroarylalkyl, cycloalkylalkyl, substituted cycloalkylalkyl, heterocyclalkyl, substituted heterocyclalkyl, alkyloxy-alkyl, substituted alkyloxy-alkyl, alkyloxy-cycloalkyl, substituted alkyloxy-cycloalkyl, alkyloxy-heterocyclyl, substituted alkyloxy-heterocyclyl, alkyloxy-aryl, substituted alkyloxy-aryl, alkyloxy-heteroaryl, substituted alkyloxy-heteroaryl, alkylthio-alkyl, substituted alkylthio-alkyl, alkylthio-cycloalkyl and substituted alkylthio-cycloalkyl.

5. The compound according to claim 4, characterized in that a ring is formed under participation of R3 and R4.

6. The compound according to claim 4 or 5, characterized in that for X2 and for X6 individually and independently R3 is selected from the group comprising phenyl, substituted phenyl, benzyl, substituted benzyl, 1,1-diphenylmethyl, substituted 1,1-diphenylmethyl, naphthylmethyl, substituted naphthylmethyl, thienylmethyl, substituted thienylmethyl, benzothienylmethyl, substituted benzothienylmethyl, imidazolylmethyl, substituted imidazolylmethyl, indolylmethyl and substituted indolylmethyl.

7. The compound according to any of claims 4 to 6 characterized in that for X5 and for X7 individually and independently R3 is selected from the group comprising C3-C5-alkyl, substituted C3-C5-alkyl, C5-C7-cycloalkyl, substituted C5-C7-cycloalkyl, C5-C7-cycloalkylmethyl, substituted C5-C7-cycloalkylmethyl, cycloalkylethyl, substituted cycloalkylethyl, benzyl, substituted benzyl, phenylethyl, naphthylmethyl, thienylmethyl, propenyl, propinyl, methylthioethyl, imidazolylmethyl, substituted imidazolylmethyl, indolylmethyl and substituted indolylmethyl.

8. The compound according to any of claims 1 to 8, characterized in that X1 is selected from the group comprising H, acetyl, propanoyl, butanoyl, benzoyl, fluoromethylcarbonyl, difluoromethylcarbonyl, phenyl, oxycarbonyl, methyl-oxycarbonyl, phenyl-aminocarbonyl, methyl-aminocarbonyl, phenyl-sulfonyl, 2,6-dioxo-hexahydro-pyrimidine-4-carbonyl and methyl-sulfonyl.

9. The compound according to any of claims 1 to 8, wherein

X2 is a derivative of an amino acid that is selected from the group comprising phenylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chlorophenylalanine, 3-chlorophenylalanine, 4-chlorophenylalanine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine, 3,3-diphenylalanine, tyrosine, tryptophane, histidine and each respective derivatives thereof;

or X2 and X1 taken together are $\text{PhCH}_2\text{CH}_2\text{CO-}$ or $\text{PhCH}_2\text{-}$;

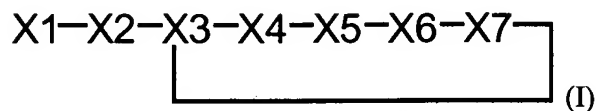
X6 is a derivative of an amino acid, that is selected from the group comprising tryptophane, phenylalanine, tyrosine, histidine, 1-naphtylalanine, benzothienylalanine, 2-aminoindan-2-carboxylic acid, 2-thienylalanine, 3-thienylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chlorophenylalanine, 3-chlorophenylalanine, 4-chlorophenylalanine and respective derivatives thereof;

X5 is a derivative of an amino acid that is selected from the group comprising D-cyclohexylalanine, D-cyclohexylglycine, D-homo-cyclohexylalanine, D-homoleucine, D-cysteine(tBu), D-cysteine(iPr), octahydroindol-2-carboxylic acid, 2-methyl-D-phenylalanine and respective derivatives thereof; and

X7 is a derivative of an amino acid that is selected from the group comprising norvaline, norleucine, homo-leucine, leucine, isoleucine, Valine, cysteine, cysteine(Me), cysteine(Et), cysteine(Pr), methionine, allylglycine, propargylglycine, cyclohexylglycine, cyclohexylalanine, phenylalanine, tyrosine, tryptophane, histidine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine and respective derivatives thereof.

10. The compound according to any of claims 1 to 9, wherein X1 and/or X4 comprise one or more groups that improve water solubility, whereby the water solubility improving group is selected from the group comprising hydroxy, keto, carboxamido, ether, urea, carbamate, amino, substituted amino, Guanidino, pyridyl and carboxyl.

11. The compound, preferably a C5a receptor antagonist, having the following structure:



, whereby X1-X3 and X5-X7 are defined as in one of claims 1 to 10 and whereby

X4 is a cyclic or a non-cyclic amino acid, whereby the cyclic amino acid is selected from the group comprising proline, pipecolinic acid, azetidine-2-carboxylic acid, tetrahydroisochinoline-3-carboxylic acid, tetrahydroisochinoline-1-carboxylic acid, octahydroindole-2-carboxylic acid, 1-aza-bicyclo-[3.3.0]-octane-2-carboxylic acid, 4-phenyl-pyrrolidine-2-carboxylic acid, cis-Hyp and trans-Hyp, and whereby the non-cyclic amino acid is selected from the group comprising Ser, Gln, Asn, Cys(O₂CH₂CH₂CONH₂), Arg, Hyp(COCH₂OCH₂CH₂OCH₂CH₂OCH₃), Hyp(CONH-CH₂CH(OH)-CH₂OH) and respective derivatives thereof and respective analogs thereof; and

the lines – in formula (I) indicate chemical bonds, whereby the chemical bond is individually and independently selected from the group comprising covalent bonds, ionic bonds and coordinative bonds, whereby preferably the bond is a chemical bond and more preferably the chemical bond is a bond selected from the group comprising amide bonds, disulfide bonds, ether bonds, thioether bonds, oxime bonds and aminotriazine bonds.

12. The compound according to claim 11, characterized in that the amino acid represented by X4 is preferably selected from the group comprising proline, pipecolinic acid, azetidine-2-carboxylic acid, tetrahydroisochinoline-3-carboxylic acid, tetrahydroisochinoline-1-carboxylic acid, octahydroindole-2-carboxylic acid, 1-aza-bicyclo-[3.3.0]-octane-2-carboxylic acid, 4-phenyl-pyrrolidine-2-carboxylic acid, Hyp, Ser, Gln, Asn, Cys(O₂CH₂CH₂CONH₂) and Arg.

13. The compound according to any of claims 11 to 12, whereby

X2 is a derivative of an amino acid that is selected from the group comprising phenylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chlorophenylalanine, 3-chlorophenylalanine, 4-chlorophenylalanine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine, 3,3-diphenylalanine, tyrosine, tryptophane, histidine and respective derivatives thereof;

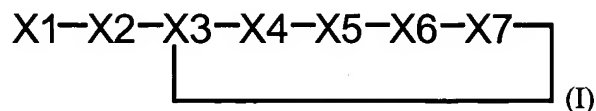
or X2 and X1 taken together are $\text{PhCH}_2\text{CH}_2\text{CO-}$ or $\text{PhCH}_2\text{-}$;

X6 is a derivative of an amino acid that is selected from the group comprising tryptophane, phenylalanine, tyrosine, histidine, 1-naphtylalanine, benzothienylalanine, 2-aminoindane-2-carboxylic acid, 2-thienylalanine, 3-thienylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chlorophenylalanine, 3-chlorophenylalanine, 4-chlorophenylalanine and respective derivatives thereof;

X5 is a derivative of an amino acid that is selected from the group comprising D-cyclohexylalanine, D-cyclohexylglycine, D-homo-cyclohexylalanine, D-homoleucine, D-cysteine(tBu), D-cysteine(iPr), octahydroindole-2-carboxylic acid, 2-methyl-D-phenylalanine and respective derivatives thereof; and

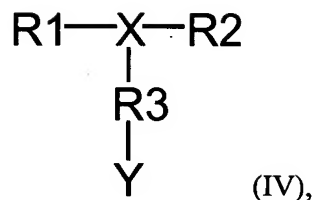
X7 is a derivative of an amino acid that is selected from the group comprising norvaline, norleucine, homo-leucine, leucine, isoleucine, Valine, cysteine, cysteine(Me), cysteine(Et), cysteine(Pr), methionine, allylglycine, propargylglycine, cyclohexylglycine, cyclohexylalanine, phenylalanine, tyrosine, tryptophane, histidine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine and respective derivatives thereof.

14. A compound, preferably a C5a receptor antagonist, having the following structure:



, whereby X1-X2 and X4-X7 are defined as in any of claims 1 to 13 and whereby

X3 has the following structure



wherein

X is C(R4) or N,

R1 is optionally present and if R1 is present then R1 is a radical which is selected from the group comprising >N-R1B, >C(R1B)(R1D) and >O, whereby R1B and R1D are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, cycloalkylalkyl and substituted cycloalkylalkyl;

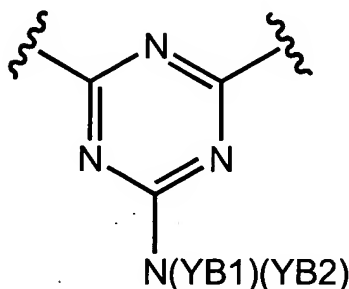
R2 is optionally present and if R2 is present then R2 is a radical that is selected from the group comprising >C=O, >C=S, >SO₂, >PO(OH), >B(OH), >CH₂, >CH₂CO, >CHF and >CF₂;

R4 is a radical, whereby the radical is selected from the group comprising H, F, CF₃, alkyl and substituted alkyl;

the binding of structure (IV) to the moieties X2 and X4 preferably takes place via R1 and R2;

R3 is a radical, whereby the radical is selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, cycloalkylalkyl, substituted cycloalkylalkyl, heterocyclylalkyl, substituted heterocyclylalkyl, arylalkyl, substituted arylalkyl, heteroarylalkyl and substituted heteroarylalkyl.

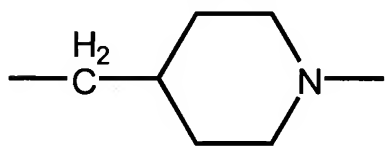
Y is optionally present and if Y is present then Y is a radical that is selected from the group comprising $-N(YB)-$, $-O-$, $-S-$, $-S-S-$, $-CO-$, $-C=N-O-$, $-CO-N(YB)-$ and



, whereby YB, YB1 and YB2 are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylakyl, substituted arylalkyl, cycloalkylalkyl and substituted cycloalkylalkyl.

15. The compound according to claim 14, characterized in that

R3 is a radical selected from the group comprising methyl, ethyl, propyl, butyl, benzyl and



Y is optionally present and if Y is present then Y is a radical selected from the group comprising $-N(YB)-$, $-O-$, $-S-$ and $-S-S-$, and YB is preferably defined as in claim 14.

16. The compound according to any of claims 14 to 15, whereby

X2 is a derivative of an amino acid selected from the group comprising phenylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chlorophenylalanine, 3-chlorophenylalanine, 4-chlorophenylalanine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine, 3,3-diphenylalanine, tyrosine, tryptophane, histidine and respective derivatives thereof;

or X2 and X1 taken together are $PhCH_2CH_2CO-$ or $PhCH_2-$;

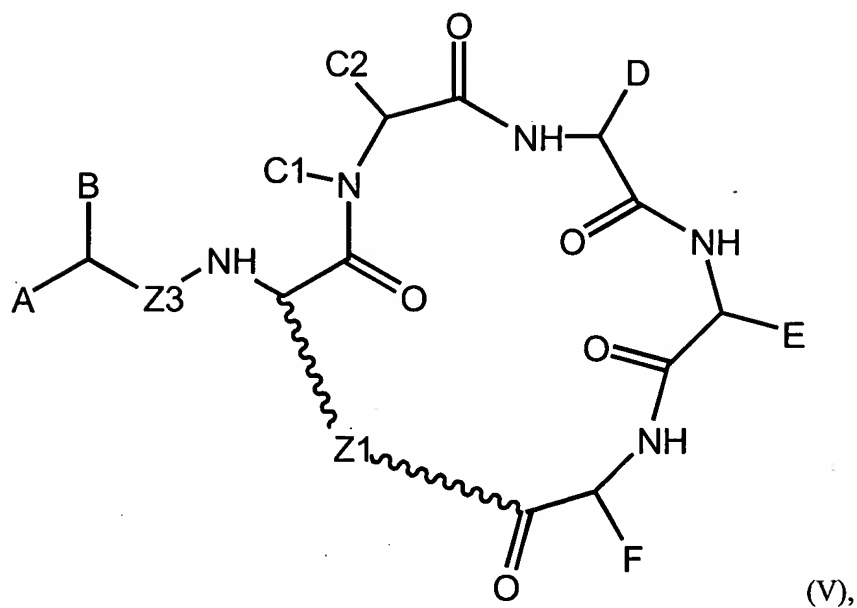
X6 is a derivative of an amino acid selected from the group comprising tryptophane, phenylalanine, tyrosine, histidine, 1-naphtylalanine, benzothienylalanine, 2-aminoindane-2-carboxylic acid, 2-thienylalanine, 3-thienylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chlorophenylalanine, 3-chlorophenylalanine, 4-chlorophenylalanine and respective derivatives thereof;

X5 is a derivative of an amino acid selected from the group comprising D-cyclohexylalanine, D-cyclohexylglycine, D-homo-cyclohexylalanine, D-homoleucine, D-cysteine(tBu), D-cysteine(iPr), octahydroindole-2-carboxylic acid, 2-methyl-D-phenylalanine and respective derivatives thereof; and

X7 is a derivative of an amino acid selected from the group comprising norvaline, norleucine, homo-leucine, leucine, isoleucine, valine, cysteine, cysteine(Me), cysteine(Et), cysteine(Pr), methionine, allylglycine, propargylglycine, cyclohexylglycine, cyclohexylalanine, phenylalanine, tyrosine, tryptophane, histidine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine and respective derivatives thereof.

17. The compound according to any of the preceding claims, characterized in that X3 is a derivative of an amino acid selected from the group comprising alpha-amino-glycine, alpha-beta-diaminopropionic acid (Dap), alpha-gamma-diaminobutyric acid (Dab), ornithine, lysine, homolysine, Phe(4-NH₂), 2-amino-3-(4-piperidiny)propionic acid and 2-amino-3-(3-piperidiny)propionic acid, and the amino acid is derivatized at the side chain.

18. A compound, preferably a C5a receptor antagonist, preferably according to any of the preceding claims, having the following structure:



, whereby

A is selected from the group comprising H, NH₂, NHalkyl, Nalkyl₂, NHacyl and OH,

B is selected from the group comprising CH₂(aryl), CH(aryl)₂, CH₂(heteroaryl), substituted CH₂(aryl), aryl, substituted aryl and heteroaryl,

C1 and C2 are individually and independently selected from the group comprising alkyl and substituted alkyl, whereby between C1 and C2 optionally a bond can be formed,

D is selected from the group comprising alkyl, cycloalkyl, CH₂(cycloalkyl), CH₂CH₂(cycloalkyl), CH₂Ph(2-Me) and CH₂-S-alkyl,

E is selected from the group comprising CH₂(aryl), substituted CH₂(aryl) and CH₂(heteroaryl),

F is selected from the group comprising alkyl, CH₂-S-alkyl, CH₂CH₂-S-Me, CH₂CH=CH₂, CH-CCH, cyclohexyl, CH₂cyclohexyl, CH₂Ph, CH₂naphtyl, CH₂thienyl,

Z1 is selected from the group comprising $(\text{CH}_2)_n\text{NH}$ with $n = 1, 2, 3, 4$, $(\text{CH}_2)_3\text{O}$, $(\text{CH}_2)_2\text{O}$, $(\text{CH}_2)_4$, $(\text{CH}_2)_3$, $\text{CH}_2\text{Ph}(4\text{-NH})$ and $\text{CH}_2(4\text{-piperidinyl})$, and

Z3 is optionally present and if Z3 is present then it is selected from the group comprising CO and CH_2 .

19. The compound according to claim 18, characterized in, that

A is selected from the group comprising H, NH_2 , NHEt , NHAc , OH,

B is selected from the group comprising CH_2Ph , $\text{CH}_2\text{Ph}(4\text{-F})$, $\text{CH}(\text{Ph})_2$, $\text{CH}_2\text{thienyl}$, $\text{CH}_2\text{naphthyl}$, phenyl, $\text{Ph}(4\text{-F})$ and thienyl,

C1 is selected from the group comprising H and methyl, C2 is selected from the group comprising methyl and CH_2OH , or if C1 and C2 are connected by a bond, the resulting structure is selected from the group comprising $-(\text{CH}_2)_2-$, $-(\text{CH}_2)_3-$, $-(\text{CH}_2)_4-$ and $-\text{CH}_2\text{CH}(\text{OH})\text{CH}_2-$.

D is selected from the group comprising $\text{CH}_2\text{CH}_2\text{iPr}$, CH_2iPr , cyclohexyl, $\text{CH}_2\text{cyclohexyl}$, $\text{CH}_2\text{CH}_2\text{cyclohexyl}$, $\text{CH}_2\text{Ph}(2\text{-Me})$, $\text{CH}_2\text{-S-tBu}$ and $\text{CH}_2\text{-S-iPr}$,

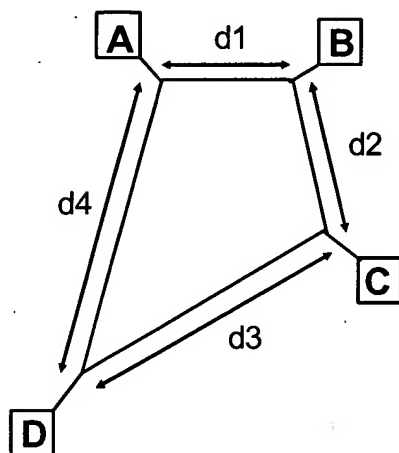
E is selected from the group comprising CH_2Ph , $\text{CH}_2\text{Ph}(2\text{-Cl})$, $\text{CH}_2\text{Ph}(3\text{-Cl})$, $\text{CH}_2\text{Ph}(4\text{-Cl})$, $\text{CH}_2\text{Ph}(2\text{-F})$, $\text{CH}_2\text{Ph}(3\text{-F})$, $\text{CH}_2\text{Ph}(4\text{-F})$, $\text{CH}_2\text{indolyl}$, $\text{CH}_2\text{thienyl}$, $\text{CH}_2\text{benzothienyl}$ and $\text{CH}_2\text{naphthyl}$,

F is selected from the group comprising $(\text{CH}_2)_3\text{CH}_3$, $(\text{CH}_2)_2\text{CH}_3$, $(\text{CH}_2)_2\text{-iPr}$, $\text{CH}_2\text{-iPr}$, iPr , $\text{CH}_2\text{-S-Et}$, $\text{CH}_2\text{CH}_2\text{-S-Me}$, $\text{CH}_2\text{CH}=\text{CH}_2$, $\text{CH}_2\text{-CCH}$ and cyclohexyl,

Z1 is selected from the group comprising $(\text{CH}_2)_n\text{NH}$ with $n=1, 2, 3, 4$, $(\text{CH}_2)_3\text{O}$, $\text{CH}_2\text{Ph}(4\text{-NH})$ and $\text{CH}_2(4\text{-piperidinyl})$, and

Z3 is optionally present, and if Z3 is present, then it is selected from the group comprising CO and CH_2 .

20. A compound, preferably a C5a receptor antagonist, whereby the compound has the following structure:



whereby d1, d2, d3 and d4 represent the distances of A, B, C and D in at least one energetically accessible conformer of the compound and have the following values:

$$d1 = 5.1 \pm 1.0 \text{ \AA}$$

$$d2 = 11.5 \pm 1.0 \text{ \AA}$$

$$d3 = 10.0 \pm 1.5 \text{ \AA}$$

$$d4 = 6.9 \pm 1.5 \text{ \AA}$$

A and C are individually and independently a hydrophobic radical, whereby the hydrophobic radical is selected from the group comprising alkyl, cycloalkyl, heterocyclyl, aryl and heteroaryl;

B and D are individually and independently an aromatic or a heteroaromatic radical, whereby preferably the aromatic radical is aryl, and preferably the heteroaromatic radical is heteroaryl.

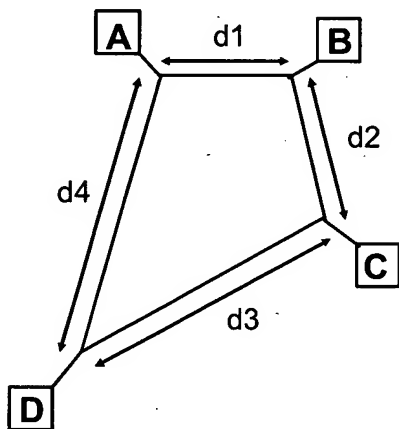
21. The compound according to claim 20, whereby A and C are individually and independently selected from the group comprising C3-C6-alkyl, C5-C7-cycloalkyl,

methylthioethyl, methylthio-tert-butyl, indolyl, phenyl, naphthyl, thienyl, propenyl, propinyl, hydroxyphenyl, indolyl and imidazolyl;

B is selected from the group comprising phenyl, substituted phenyl, naphthyl, thienyl, benzothienyl, hydroxyphenyl, indolyl, and imidazolyl; and

D is selected from the group comprising phenyl, naphthyl, thienyl, thiazolyl, furanyl, hydroxyphenyl, indolyl and imidazolyl.

22. A compound, preferably a C5a receptor antagonist, having the following structure:



, whereby

A, B, C and D represent the C-alpha atoms in amino acids, amino acid analogs or amino acid derivatives,

d1, d2, d3 and d4 represent the distances of A, B, C and D in at least one energetically accessible conformer of the compound and have the following values:

$$d1 = 3,9 \pm 0,5 \text{ \AA}$$

$$d2 = 3,9 \pm 0,5 \text{ \AA}$$

$$d3 = 9,0 \pm 1,5 \text{ \AA}$$

$$d4 = 9,0 \pm 1,5 \text{ \AA};$$

whereby the amino acids whose alpha-atoms are represented by A and C, individually and independently have a hydrophobic amino acid side chain that comprises an alkyl-, cycloalkyl, cycloalkylalkyl, heterocyclyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl or methylthio-tert-butyl group,

whereby the amino acids whose alpha-atoms are represented by B and D, individually and independently have an aromatic or heteroaromatic amino acid side chain that comprises an aryl, arylalkyl, heteroaryl or heteroarylalkyl group.

23. The compound according to claim 22,

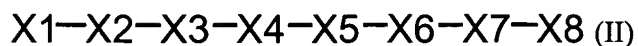
whereby the amino acid whose alpha-atom is represented by A, is selected from the group comprising C3-C6-alkyl, methylthioethyl, propenyl, propinyl, R5, methyl-R5 and ethyl-R5, whereby R5 is a radical that is selected from the group comprising C5-C7-cycloalkyl, phenyl, substituted phenyl, hydroxyphenyl, indolyl, imidazolyl, naphthyl and thienyl;

whereby the amino acid whose alpha-atom is represented by B, is selected from the group comprising R5, methyl-R5 and ethyl-R5, whereby R5 is a radical that is selected from the group comprising phenyl, substituted phenyl, naphthyl, thienyl, benzothienyl, hydroxyphenyl, indolyl and imidazolyl;

whereby the amino acid whose alpha-atom is represented by C, is selected from the group comprising C3-C6-alkyl, R5, methyl-R5 and ethyl-R5, whereby R5 is a radical that is selected from the group comprising C5-C7-cycloalkyl, phenyl, 1-methyl-phenyl, 2-methyl-phenyl, 3-methyl-phenyl and S-tBu; and

whereby the amino acid whose alpha-atom is represented by D, is selected from the group comprising R5, methyl-R5 and ethyl-R5, whereby R5 is a radical, that is selected from the group comprising phenyl, naphthyl, thienyl, thiazolyl, furanyl, hydroxyphenyl, indolyl and imidazolyl.

24. A compound, preferably a C5a receptor antagonist, having the following structure:



, whereby

X1 is a radical having a mass of about 1-300 and whereby X1 is preferably selected from the group comprising R5-, R5-CO-, R5-N(R6)-CO-, R5-O-CO-, R5-SO₂-, R5-N(R6)-SO₂-, R5-N(R6)-, R5-N(R6)-CS-, R5-N(R6)-C(NH)-, R5-CS-, R5-P(O)OH-, R5-B(OH)-, R5-CH=N-O-CH₂-CO-, whereby R5 and R6 are individually and independently selected from the group comprising H, F, hydroxy, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, arylalkyl, substituted arylalkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, acyl, substituted acyl, alkoxy, alkoxyalkyl, substituted alkoxyalkyl, aryloxyalkyl and substituted aryloxyalkyl,

X2 is a radical that mimics the biological binding characteristics of a phenylalanine unit,

X3 and X4 are individually and independently a spacer, whereby the spacer is preferably selected from the group comprising amino acids, amino acid analogs and amino acid derivatives,

X5 is a radical that mimics the biological binding characteristics of a cyclohexylalanine or homoleucine unit,

X6 is a radical that mimics the biological binding characteristics of a tryptophane unit,

X7 is a radical that mimics the biological binding characteristics of a norleucine or phenylalanine unit,

X8 is a radical, whereby the radical is optionally present in structure II, and if it is present, it is selected from the group comprising H, NH₂, OH, NH-OH, NH-Oalkyl, amino, substituted amino, alkoxy, substituted alkoxy, hydrazino, substituted hydrazino, aminooxy, substituted aminooxy, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl,

heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, aryl, substituted aryl, amino acid, amino acid derivative and amino acid analogon;

the connecting lines – in formula (II) represent chemical bonds, whereby the chemical bond is individually and independently selected from the group comprising covalent bonds, ionic bonds and coordinative bonds, whereby preferably the bond is a chemical bond and more preferably the chemical bond is a bond selected from the group comprising amide bonds, disulfide bonds, ether bonds, thioether bonds, oxime bonds and aminotriazine bonds.

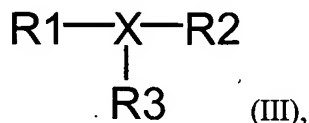
25. The compound according to claim 24, whereby

X1 is a radical having a mass of about 1-300, whereby the radical is preferably selected from the group comprising R5, R5-CO-, R5-N(R6)-CO-, R5-O-CO-, R5-SO₂-, R5-N(R6)-C(NH)-, whereby preferably R5 and R6 are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl and substituted aryl;

X2 and X6 are individually and independently an aromatic amino acid, a derivative or an analogon thereof,

X5 and X7 are individually and independently a hydrophobic amino acid, a derivative or an analogon thereof.

26. The compound according to any of claims 24 to 25, whereby X2, X5, X6 and X7 have individually and independently the following structure:



whereby

X is C(R4) or N,

R1 is optionally present and if R1 is present, it is a radical that is selected from the group comprising $>\text{N-R1B}$, $>\text{C(R1B)(R1D)}$ and $>\text{O}$, whereby R1B and R1D are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, cycloalkylalkyl and substituted cycloalkylalkyl;

R2 is optionally present and if R2 is present, it is a radical selected from the group comprising $>\text{C=O}$, $>\text{C=S}$, $>\text{SO}_2$, $>\text{S=O}$, $>\text{C=NH}$, $>\text{C=N-CN}$, $>\text{PO(OH)}$, $>\text{B(OH)}$, $>\text{CH}_2$, $>\text{CH}_2\text{CO}$, $>\text{CHF}$ and $>\text{CF}_2$;

R4 is a radical, whereby the radical is selected from the group comprising H, F, CH_3 , CF_3 , alkyl and substituted alkyl;

and the binding of structure (III) to the moieties X1 and X3, X4 and X6, X5 and X7, and X6 and X8 preferably takes place via R1 and R2;

for X2 and for X6 individually and independently R3 is a radical, whereby the radical comprises an aromatic group and is selected from the group comprising aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl, substituted heteroarylalkyl, alkyloxy-alkyl, substituted alkyloxy-alkyl, alkyloxy-cycloalkyl, substituted alkyloxy-cycloalkyl, alkyloxy-heterocyclyl, substituted alkyloxy-heterocyclyl, alkyloxy-aryl, substituted alkyloxy-aryl, alkyloxy-heteroaryl, substituted alkyloxy-heteroaryl, alkylthio-alkyl, substituted alkylthio-alkyl, alkylthio-cycloalkyl and substituted alkylthio-cycloalkyl; and

for X5 and for X7 individually and independently R3 is a radical, whereby the radical comprises an aliphatic or aromatic group and preferably is selected from the group comprising alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl, substituted heteroarylalkyl, cycloalkylalkyl, substituted cycloalkylalkyl, heterocyclylalkyl, substituted heterocyclylalkyl, alkyloxy-alkyl, substituted alkyloxy-alkyl, alkyloxy-cycloalkyl, substituted alkyloxy-cycloalkyl, alkyloxy-heterocyclyl, substituted alkyloxy-heterocyclyl, alkyloxy-aryl, substituted alkyloxy-aryl, alkyloxy-heteroaryl, substituted

alkyloxy-heteroaryl, alkylthio-alkyl, substituted alkylthio-alkyl, alkylthio-cycloalkyl and substituted alkylthio-cycloalkyl.

27. The compound according to claim 26, characterized in that a ring is formed using R3 and R4.

28. The compound according to claim 26 or 27, characterized in that for X2 and for X6 individually and independently R3 is selected from the group comprising phenyl, substituted phenyl, benzyl, substituted benzyl, 1,1-diphenylmethyl, substituted 1,1-diphenylmethyl, naphthylmethyl, substituted naphthylmethyl, thienylmethyl, substituted thienylmethyl, benzothienylmethyl, substituted benzothienylmethyl, imidazolylmethyl, substituted imidazolylmethyl, indolylmethyl and substituted indolylmethyl.

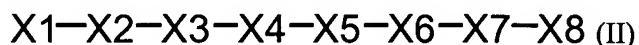
29. The compound according to any of claims 24 to 28, in particular according to any of claims 26 to 28, characterized in that for X5 and for X7 individually and independently R3 is selected from the group comprising C3-C5-alkyl, substituted C3-C5-alkyl, C5-C7-cycloalkyl, substituted C5-C7-cycloalkyl, C5-C7-cycloalkylmethyl, substituted C5-C7-cycloalkylmethyl, cycloalkylethyl, substituted cycloalkylethyl, benzyl, substituted benzyl, phenylethyl, naphthylmethyl, thienylmethyl, propenyl, propinyl, methylthioethyl, imidazolylmethyl, substituted imidazolylmethyl, indolylmethyl and substituted indolylmethyl.

30. The compound according to any of the preceding claims, in particular according to any of claims 24 to 29, characterized in that X8 is selected from the group comprising H, OR1 and NR1R2, whereby R1 and R2 are individually and independently selected from the group comprising H, alkyl, aryl, cycloalkyl and arylalkyl.

31. The compound according to any of claims 24 to 30, characterized in that X1 is selected from the group comprising H, acetyl, propanoyl, butanoyl, benzoyl, fluoromethylcarbonyl, difluoromethylcarbonyl, phenyl, oxycarbonyl, methyl-oxycarbonyl, phenyl-aminocarbonyl, methyl-aminocarbonyl, phenyl-sulfonyl, 2,6-dioxo-hexahydro-pyrimidine-4-carbonyl and methyl-sulfonyl.

32. The compound according to any of claims 24 to 31, whereby X1 and/or X4 comprise one or more groups that improve water solubility, whereby the water solubility improving group is selected from the group comprising hydroxy, keto, carboxamido, ether, urea, carbamate, amino, substituted amino, guanidino, pyridyl and carboxyl.

33. A compound, preferably a C5a receptor antagonist, having the following structure:



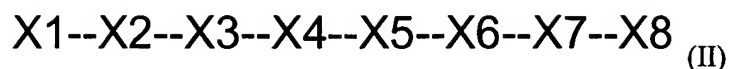
, whereby X1-X3 and X5-X8 are defined as in any of claims 24 to 32 and whereby

X4 is a cyclic or a non-cyclic amino acid, whereby the cyclic amino acid is selected from the group comprising proline, pipecolic acid, azetidine-2-carboxylic acid, tetrahydroisoquinoline-3-carboxylic acid, tetrahydroisoquinoline-1-carboxylic acid, octahydroindole-2-carboxylic acid, 1-aza-bicyclo-[3.3.0]-octane-2-carboxylic acid, 4-phenyl-pyrrolidine-2-carboxylic acid, cis-Hyp and trans-Hyp, and the non-cyclic amino acid is selected from the group comprising Ser, Gln, Asn, Cys(O₂CH₂CH₂CONH₂), Arg, Hyp(COCH₂OCH₂CH₂OCH₂CH₂OCH₃), Hyp(CONH-CH₂CH(OH)-CH₂OH) and respective derivatives thereof and respective analogs thereof; and

the connecting lines – in formula (I) represent chemical bonds, whereby preferably the chemical bond is individually and independently selected from the group comprising covalent bonds, ionic bonds and coordinative bonds, whereby preferably the bond is a chemical bond and more preferably the chemical bond is a bond selected from the group comprising amide bonds, disulfide bonds, ether bonds, thioether bonds, oxime bonds and aminotriazine bonds.

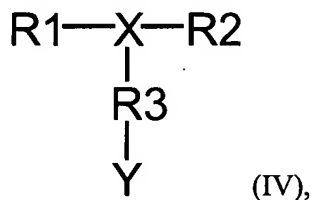
34. The compound according to claim 33, characterized in that the amino acid represented by X4 preferably is chosen from the group comprising proline, Pipecolic acid, azetidine-2-carboxylic acid, tetrahydroisoquinoline-3-carboxylic acid, tetrahydroisoquinoline-1-carboxylic acid, octahydroindole-2-carboxylic acid, 1-aza-bicyclo-[3.3.0]-octane-2-carboxylic acid, 4-phenyl-pyrrolidine-2-carboxylic acid, Hyp, Ser, Gln, Asn, Cys(O₂CH₂CH₂CONH₂) and Arg.

35. A compound, preferably a C5a receptor antagonist, having the following structure:



, whereby X1-X2 and X4-X8 are defined as in any of claims 24 to 34 and whereby

X3 has the following structure:



whereby

X is C(R4) or N,

R1 is optionally present and if R1 is present it is a radical selected from the group comprising >N-R1B, >C(R1B)(R1D) and >O, whereby R1B and R1D are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, cycloalkylalkyl and substituted cycloalkylalkyl;

R2 is optionally present and if R2 is present it is a radical selected from the group comprising >C=O, >C=S, >SO₂, >PO(OH), >B(OH), >CH₂, >CH₂CO, >CHF and >CF₂;

R4 is a radical, whereby the radical is selected from the group comprising H, F, CF₃, alkyl and substituted alkyl;

the binding of structure (IV) to the moieties X2 and X4 preferably takes place via R1 and R2;

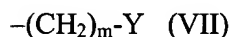
R3 is a radical selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, cycloalkylalkyl, substituted cycloalkylalkyl, heterocyclyl, substituted heterocyclyl, heterocyclylalkyl, substituted heterocyclylalkyl, aryl, substituted aryl, arylalkyl, substituted arylalkyl, heteroaryl, substituted heteroaryl, heteroarylalkyl, substituted heteroarylalkyl, acyl, substituted acyl, alkoxyalkyl, substituted alkoxyalkyl, aryloxyalkyl,

substituted aryloxyalkyl, sulfhydrylalkyl, substituted sulfhydrylalkyl, hydroxyalkyl, substituted hydroxyalkyl, carboxyalkyl, substituted carboxyalkyl, carboxamidoalkyl, substituted carboxamidoalkyl, carboxyhydrazinoalkyl, ureidoalkyl, aminoalkyl, substituted aminoalkyl, guanidinoalkyl and substituted guanidinoalkyl;

Y is optionally present and if present is a radical that is selected from the group comprising H, -N(YB1)-CO-YB2, -N(YB1)-CO-N(YB2)(YB3), -N(YB1)-C(N-YB2)-N(YB3)(YB4), -N(YB1)(YB2), -N(YB1)-SO₂-YB2, O-YB1, S-YB1, -CO-YB1, -CO-N(YB1)(YB2) and -C=N-O-YB1, whereby YB1, YB2, YB3 and YB4 are individually and independently selected from the group comprising H, CN, NO₂, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, cycloalkylalkyl and substituted cycloalkylalkyl.

36. The compound according to claim 35, characterized in that

R3 is a radical having the structure



or



, whereby

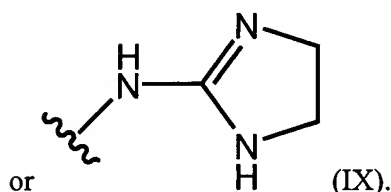
m is 1, 2, 3 or 4;

Y is N(R3b)(R3c) or -N(YB1)-C(N-YB2)-N(YB3)(YB4), whereby R3b, R3c, YB1, YB2, YB3 and YB4 are individually and independently selected from the group comprising H, CN and alkyl.

37. The compound according to claim 35 or 36, characterized in that a ring is formed between two moieties of the compound, whereby the moieties of the compound are individually and independently selected from the group comprising YB1, YB2, YB3 and YB4.

38. The compound according to claim 37, characterized in that the ring is formed using YB2 and YB3.

39. The compound according to any of claims 35 to 38, characterized in that Y is -NH₂



40. The compound according to any of claims 24 to 39, whereby

X2 is a derivative of an amino acid selected from the group comprising phenylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chloro-phenylalanine, 3-chloro-phenylalanine, 4-chloro-phenylalanine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine, 3,3-diphenylalanine, tyrosine, tryptophane, histidine and respective derivatives thereof;

or X2 and X1 together are PhCH₂CH₂CO- or PhCH₂-;

X6 is a derivative of an amino acid selected from the group comprising tryptophane, phenylalanine, tyrosine, histidine, 1-naphtylalanine, benzothienylalanine, 2-aminoindane-2-carboxylic acid, 2-thienylalanine, 3-thienylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chloro-phenylalanine, 3-chloro-phenylalanine, 4-chloro-phenylalanine and respective derivatives thereof;

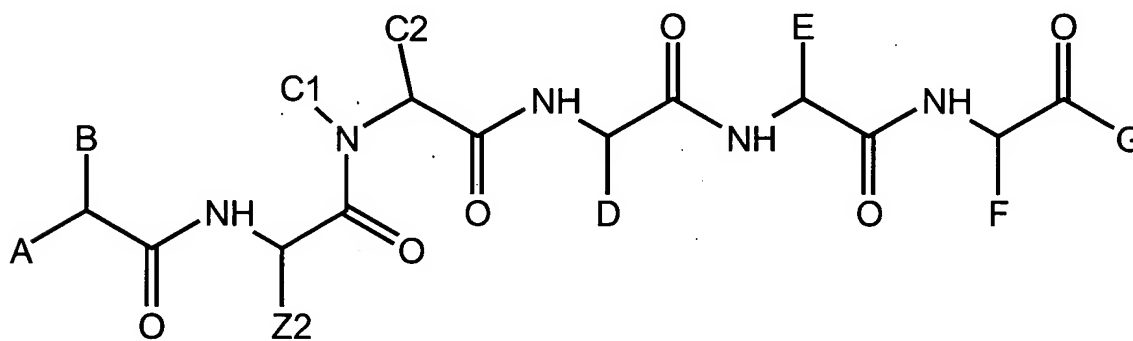
X5 is a derivative of an amino acid selected from the group comprising D-cyclohexylalanine, D-cyclohexylglycine, D-homo-cyclohexylalanine, D-homoleucine, D-cysteine(tBu), D-cysteine(iPr), octahydroindole-2-carboxylic acid, 2-methyl-D-phenylalanine and respective derivatives thereof; and

X7 is a derivative of an amino acid selected from the group comprising norvaline, norleucine, homo-leucine, leucine, isoleucine, valine, cysteine, cysteine(Me), cysteine(Et), cysteine(Pr),

methionine, allylglycine, propargylglycine, cyclohexylglycine, cyclohexylalanine, phenylalanine, tyrosine, tryptophane, histidine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine and respective derivatives thereof.

41. The compound according to any of the preceding claims, characterized in that X3 is an amino acid derivative of an amino acid, whereby the amino acid is selected from the group comprising alpha-amino-glycine, alpha-beta-diaminopropionic acid (Dap), alpha-gamma-diaminobutanoic acid (Dab), ornithine, lysine, homolysine, Phe(4-NH₂), 2-amino-3-(4-piperidinyl)propionic acid and 2-amino-3-(3-piperidinyl)propionic acid, and the amino acid is derivatized at the side chain.

42. A compound, preferably a C5a receptor antagonist, preferably according to any of the preceding claims, having the following structure:



(VI),

, whereby

A is selected from the group comprising H, NH₂, NHalkyl, Nalkyl₂, NHacyl, substituted NHacyl and OH,

B is selected from the group comprising CH₂(aryl), CH(aryl)₂, CH₂(heteroaryl) and substituted CH₂(aryl),

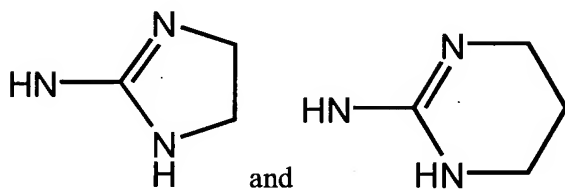
C1 and C2 are individually and independently selected from the group comprising alkyl and substituted alkyl, whereby optionally a bond can be formed between C1 and C2,

D is selected from the group comprising alkyl, cycloalkyl, $\text{CH}_2(\text{cycloalkyl})$, $\text{CH}_2\text{CH}_2(\text{cycloalkyl})$, $\text{CH}_2\text{Ph}(2\text{-Me})$ and $\text{CH}_2\text{-S-alkyl}$,

E is selected from the group comprising $\text{CH}_2(\text{aryl})$, substituted $\text{CH}_2(\text{aryl})$ and $\text{CH}_2(\text{heteroaryl})$,

F is selected from the group comprising alkyl, $\text{CH}_2\text{-S-alkyl}$, $\text{CH}_2\text{CH}_2\text{-S-Me}$, $\text{CH}_2\text{CH=CH}_2$, CH-CCH , cyclohexyl, $\text{CH}_2\text{cyclohexyl}$, CH_2Ph , $\text{CH}_2\text{naphtyl}$, $\text{CH}_2\text{thienyl}$, and

Z2 is $-\text{R}_3\text{-Y-}$, whereby R_3 is selected from the group comprising H, alkyl, arylalkyl, and Y is optionally present, and if Y is present, Y is selected from the group comprising H, N(YB1)(YB2) , $\text{N(YB1)C(N-YB2)-N(YB3)(YB4)}$,



, whereby YB1, YB2, YB3 and YB4 are individually and independently selected from the group comprising H, CN and alkyl, and optionally a ring is formed using at least two of YB1, YB2, YB3 and YB4, and

G is selected from the group comprising H, OR1 and NR_1R_2 , whereby R_1 and R_2 are individually and independently selected from the group comprising H, alkyl, aryl, cycloalkyl and arylalkyl.

43. The compound according to claim 42, characterized in that

A is selected from the group comprising H, NH_2 , NHEt , NHAc , OH,

B is selected from the group comprising CH_2Ph , $\text{CH}_2\text{Ph}(4\text{-F})$, CH(Ph)_2 , $\text{CH}_2\text{thienyl}$ and $\text{CH}_2\text{naphtyl}$,

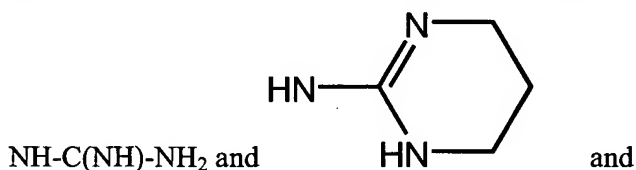
C1 is selected from the group comprising H and methyl, C2 is selected from the group comprising methyl and CH₂OH, or if C1 and C2 are connected by a bond, the thus resulting structure is selected from the group comprising $-(CH_2)_2-$, $-(CH_2)_3-$, $-(CH_2)_4-$ and $-CH_2CH(OH)CH_2-$.

D is selected from the group comprising CH₂CH₂iPr, CH₂iPr, cyclohexyl, CH₂cyclohexyl, CH₂CH₂cyclohexyl, CH₂Ph(2-Me), CH₂-S-tBu and CH₂-S-iPr,

E is selected from the group comprising gCH₂Ph, CH₂Ph(2-Cl), CH₂Ph(3-Cl), CH₂Ph(4-Cl), CH₂Ph(2-F), CH₂Ph(3-F), CH₂Ph(4-F), CH₂indolyl, CH₂thienyl, CH₂benzothienyl and CH₂naphtyl,

F is selected from the group comprising (CH₂)₃CH₃, (CH₂)₂CH₃, (CH₂)₂-iPr, CH₂-iPr, iPr, CH₂-S-Et, CH₂CH₂-S-Me, CH₂CH=CH₂, CH₂-CCH and cyclohexyl,

Z2 is -R3-Y-, whereby R3 is selected from the group comprising CH₂, (CH₂)₂, (CH₂)₃, (CH₂)₄ and CH₂-C₆H₄, and Y is selected from the group comprising NH₂, NHEt, N(Et)₂,



G is selected from the group comprising NH₂, NHMe, OH, and H.

44. The compound according to any of the preceding claims, whereby the compound is one of the following compounds:

No.	Compound
1	Ac-Phe-[Orn-Pro-cha-Trp-Phe]
2	Ac-Phe-[Orn-Hyp-cha-Trp-Phe]
3	HOCH ₂ (CHOH) ₄ -C=N-O-CH ₂ -CO-Phe-[Orn-Pro-cha-Trp-Nle]
4	X-Phe-[Orn-Pro-cha-Trp-Nle]; X = 2-acetamido-1-methyl-glucuronyl

5	Ac-Phe-[Orn-Hyp(COCH ₂ OCH ₂ CH ₂ OCH ₂ CH ₂ OCH ₃)-cha-Trp-Nle]
6	Ac-Phe-[Orn-Hyp(CONH-CH ₂ CH(OH)-CH ₂ OH)-cha-Trp-Nle]
20	Ac-Phe-[Orn-Pro-cha-Trp-Ecr]
28	Ac-Phe-[Orn-Pro-cha-Trp-Nle]
29	Ac-Phe-[Orn-Pro-cha-Trp-Met]
31	Ac-Phe-[Orn-Pro-cha-Trp-Nva]
32	Ac-Phe-[Orn-Pro-cha-Trp-Hle]
33	Ac-Phe-[Orn-Pro-cha-Trp-Eaf]
34	Ac-Phe-[Orn-Pro-cha-Trp-Ebd]
35	Ac-Phe-[Orn-Pro-cha-Trp-Eag]
36	Ac-Phe-[Orn-Pro-cha-Trp-Pmf]
37	Ac-Phe-[Orn-Pro-cha-Trp-2Ni]
38	Ac-Phe-[Orn-Pro-cha-Trp-Thi]
41	Ph-CH ₂ -CH ₂ -CO-[Orn-Pro-cha-Trp-Nle]
42	H-Phe-[Orn-Pro-cha-Trp-Nle]
43	Ac-Lys-Phe-[Orn-Pro-cha-Trp-Nle]
44	H-Phe-[Orn-Ser-cha-Trp-Nle]
51	Ac-Phe-Orn-Pro-cha-Trp-Phe-NH ₂
52	Ac-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
53	Ac-Phe-Orn-Pro-cha-Bta-2Ni-NH ₂
54	Ac-Phe-Orn-Pro-cha-Bta-Cha-NH ₂
55	Ac-Phe-Orn-Pip-cha-Trp-Phe-NH ₂
56	Ph-CH ₂ -[Orn-Pro-cha-Trp-Nle]
57	Ph-CH ₂ -[Orn-Pro-cha-Trp-Phe]
58	Ac-Phe-[Orn-Pro-cha-Trp-1Ni]
59	Ph-CH(OH)-CH ₂ -CO-[Orn-Pro-cha-Trp-Nle]
61	Ac-Phe-Orn-Pro-cha-Trp-Phe-NH ₂
62	Ac-Phe-Orn-Pro-cha-Bta-Phe-NH ₂
64	Ac-Phe-Orn-Pro-cha-Trp-2Ni-NH ₂
65	Ac-Phe-Orn-Pro-cha-Trp-Cha-NH ₂
66	Ac-Thi-Orn-Aze-cha-Bta-Phe-NH ₂

67	Ac-Thi-Orn-Pip-cha-Bta-Phe-NH ₂
68	Ac-Phe-Orn-Pro-cha-Trp-Eap-NH ₂
69	Me ₂ -Phe-Orn-Pro-cha-Trp-Phe-NH ₂
70	Ph ₂ -CH-CH ₂ -CO-Orn-Pro-cha-Trp-Phe-NH ₂
71	Ac-Ebw-Orn-Pro-cha-Trp-Phe-NH ₂
72	Ac-Phe-Orn-Pro-cha-Trp-NH-CH ₂ -CH ₂ -Ph
73	Ac-Phe-Orn-Aze-cha-Bta-NH-CH ₂ -CH ₂ -Ph
74	H-Phe-Orn-Pro-cha-Trp-Phe-NH ₂
75	H-Me-Phe-Orn-Pro-cha-Trp-Phe-NH ₂
76	Bu-NH-CO-Phe-Orn-Pro-cha-Trp-Phe-NH ₂
77	Ac-Thi-Orn-Pro-cha-Trp-Phe-NH ₂
78	Ac-Ebw-Orn-Pro-cha-Trp-Phe-NH ₂
79	Ac-Phe-Orn-Ala-cha-Trp-Phe-NH ₂
80	Ac-Phe-Orn-Pro-cha-Trp-Thi-NH ₂
81	Ac-Phe-Orn-Aze-cha-Pcf-Phe-NH ₂
82	Ac-Phe-Orn(Ac)-Pro-cha-Trp-Phe-NH ₂
83	Ac-Phe-Orn-Aze-cha-Trp-Phe-NH ₂
84	Ac-Phe-Trp-Pro-cha-Trp-Phe-NH ₂
85	Ph-NH-CO-Phe-Orn-Pro-cha-Trp-Phe-NH ₂
86	Bu-O-CO-Phe-Orn-Pro-cha-Trp-Phe-NH ₂
87	Ac-Phe-Lys-Pro-cha-Trp-Phe-NH ₂
88	Ac-Phe-Arg-Pro-cha-Trp-Phe-NH ₂
89	Ac-Phe-Gln-Pro-cha-Trp-Phe-NH ₂
92	Ac-Phe-Orn-Pip-cha-Trp-Phe-NH ₂
93	Ac-Phe-Orn-Hyp-cha-Trp-Phe-NH ₂
94	Ac-Phe-Orn-Pro-cha-Trp-1Ni-NH ₂
95	Ac-Phe-Orn-Aze-cha-Bta-Phe-NH-Me
96	CH ₃ -SO ₂ -Phe-Orn-Aze-cha-Bta-Phe-NH ₂
99	Ac-Phe-Orn-Aze-cha-Pff-Phe-NH ₂
100	Ac-Phe-Orn-Aze-cha-Mcf-Phe-NH ₂
101	Ac-Phe-Orn(Ac)-Aze-cha-Bta-Phe-NH ₂
102	Ac-Ebw-Orn-Pro-cha-Trp-Phe-NH ₂
103	Ac-Phe-Trp-Pro-cha-Trp-Phe-NH ₂

104	Ac-Phe-Arg-Pro-cha-Trp-Phe-NH ₂
105	Ac-Phe-Orn-Pip-cha-Trp-Phe-NH ₂
106	3PP-Orn-Aze-cha-Bta-Phe-NH ₂
107	Ac-Phe-Orn-Tic-cha-Trp-Phe-NH ₂
108	Ac-Phe-Orn-Ser-cha-Trp-Phe-NH ₂
109	Ac-Phe-Orn-Pro-chg-Trp-Phe-NH ₂
110	Ac-Phe-Orn-Pro-hch-Trp-Phe-NH ₂
111	Ac-Phe-Orn-Pro-cha-Trp-Phg-NH ₂
112	Ac-Phe-Bta-Aze-cha-Bta-Phe-NH ₂
113	Ac-Phe-Trp-Pro-cha-Bta-Phe-NH ₂
115	Ac-Phe-Orn-Pip-cha-Trp-Phe-OH
116	Ac-Phe-Orn-Tic-cha-Trp-Phe-OH
117	Ac-Phe-Orn-Ser-cha-Trp-Phe-OH
118	Ac-Phe-Orn-Pro-chg-Trp-Phe-OH
119	Ac-Phe-Eec-Pro-cha-Bta-Phe-NH ₂
120	Ac-Phe-Nle-Pro-cha-Bta-Phe-NH ₂
121	Ac-Phe-Har-Pro-cha-Bta-Phe-NH ₂
122	Ac-Phe-Arg-Pro-cha-Bta-Phe-NH ₂
123	Ac-Phe-Cys(Acm)-Pro-cha-Bta-Phe-NH ₂
124	Ac-Phe-Mpa-Pro-cha-Bta-Phe-NH ₂
125	Ac-Eby-Orn-Pro-cha-Bta-Phe-NH ₂
126	Ac-Phg-Orn-Pro-cha-Bta-Phe-NH ₂
127	Ac-Phe-Paf-Pro-cha-Bta-Phe-NH ₂
128	H ₂ N-CO-Phe-Orn-Pro-cha-Bta-Phe-NH ₂
129	Me-O-CO-Phe-Orn-Pro-cha-Bta-Phe-NH ₂
130	(-CO-CH ₂ -NH-CO-)-Phe-Orn-Pro-cha-Bta-Phe-NH ₂
132	Ac-Phe-Orn-Pro-hch-Trp-Phe-OH
133	(-CO-CH ₂ -CH ₂ -CO-)-Phe-Orn-Pro-cha-Bta-Phe-NH ₂
134	^t Bu-CO-Phe-Orn-Pro-cha-Bta-Phe-NH ₂
135	Ac-Lys-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
136	Ac-Gly-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
137	Ac-Arg-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
138	Ac-His-Phe-Orn-Aze-cha-Bta-Phe-NH ₂

139	Ac-Ser-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
140	Ac-Guf-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
141	Ac-Dab-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
142	FH ₂ C-CO-Phe-Orn-Pro-cha-Bta-Phe-NH ₂
143	Ac-Phe-Orn(Et ₂)-Pro-cha-Trp-Phe-NH ₂
144	Ac-Phe-[Orn-Hyp-cha-Trp-Nle]
145	3PP-[Orn-Hyp-cha-Trp-Nle]
146	Ac-Phe-[Orn-Pro-cha-Trp-Tyr]
147	Ac-Phe-[Orn-Pro-omf-Trp-Nle]
149	Ac-Phe-Orn-Pro-hle-Bta-Phe-NH ₂
150	Ac-Phe-Arg(CH ₂ -CH ₂)-Pro-cha-Bta-Phe-NH ₂
151	Ac-Ala-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
152	Ac-Arg-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
153	Ac-Cit-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
154	Ac-Gly-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
155	Ac-Gly-Phe-Orn-Aze-chg-Bta-Phe-NH ₂
156	Ac-Gly-Phe-Orn-Aze-hch-Bta-Phe-NH ₂
157	Ac-Gly-Thi-Orn-Aze-cha-Bta-Phe-NH ₂
158	Ac-His-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
159	Ac-Hyp-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
160	Ac-Lys-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
161	Ac-Mff-Orn-Pro-cha-Bta-Phe-NH ₂
162	Ac-Mff-Orn-Pro-hle-Bta-Phe-NH ₂
163	Ac-Mff-Orn-Pro-hle-Mcf-Mff-NH ₂
164	Ac-Mmy-Orn-Pro-hle-Pff-Phe-NH ₂
165	Ac-NMF-Orn-Pro-cha-Bta-Phe-NH ₂
166	Ac-Off-Orn-Pro-cha-Bta-Phe-NH ₂
167	Ac-Off-Orn-Pro-hle-Bta-Phe-NH ₂
168	Ac-Orn-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
169	Ac-Pff-Orn-Pro-cha-Bta-Phe-NH ₂
170	Ac-Pff-Orn-Pro-hle-Bta-Phe-NH ₂
171	Ac-Pff-Orn-Pro-hle-Mcf-Pff-NH ₂
172	Ac-Phe-[Cys-Pro-cha-Bta-Phe-Cys]-NH ₂

173	Ac-Phe-[Orn-Asn-cha-Trp-Nle]
174	Ac-Phe-[Orn-Aze-cha-Trp-Nle]
175	Ac-Phe-[Orn-Chy-cha-Trp-Nle]
176	Ac-Phe-[Orn-HyA-cha-Trp-Phe]
177	Ac-Phe-[Orn-Hyp-hle-Bta-Phe]
178	Ac-Phe-[Orn-Hyp-hle-Mcf-Phe]
179	Ac-Phe-[Orn-Hyp-hle-Pff-Nle]
180	Ac-Phe-[Orn-Hyp-hle-Pff-Phe]
181	Ac-Phe-[Orn-Hyp-hle-Trp-Phe]
182	Ac-Phe-[Orn-Hyp-Mmf-Trp-Nle]
183	Ac-Phe-[Orn-Hyp-Mmf-Trp-Phe]
184	Ac-Phe-[Orn-NMD-cha-Trp-Nle]
185	Ac-Phe-[Orn-Pip-hle-Bta-Phe]
186	Ac-Phe-[Orn-Pro-cha-Pff-Nle]
187	Ac-Phe-[Orn-Pro-cha-Pff-Phe]
188	Ac-Phe-[Orn-Pro-cha-Trp-1Ni]
189	Ac-Phe-[Orn-Pro-cha-Trp-Cha]
190	Ac-Phe-[Orn-Pro-cha-Trp-Chg]
192	Ac-Phe-[Orn-Pro-cha-Trp-Ecr]
193	Ac-Phe-[Orn-Pro-cha-Trp-Leu]
194	Ac-Phe-[Orn-Pro-cha-Trp-nle]
195	Ac-Phe-[Orn-Pro-cha-Trp-Phe]
196	Ac-Phe-[Orn-Pro-hle-Bta-Nle]
197	Ac-Phe-[Orn-Pro-hle-Bta-Phe]
198	Ac-Phe-[Orn-Pro-hle-Pff-Phe]
199	Ac-Phe-[Orn-Pro-hle-Trp-Nle]
200	Ac-Phe-[Orn-Ser-cha-Trp-Nle]
201	Ac-Phe-[Orn-Ser-cha-Trp-Nle]
202	Ac-Phe-[Orn-Ser-hle-Trp-Nle]
203	Ac-Phe-[Orn-Thr-cha-Trp-Nle]
204	Ac-Phe-[Orn-Tic-cha-Trp-Nle]
205	Ac-Phe-[Orn-Tic-cha-Trp-Nle]
206	Ac-Phe-Ala-Pro-cha-Bta-Phe-NH ₂

207	Ac-Phe-Arg-Pro-hle-Bta-Phe-NH ₂
208	Ac-Phe-Arg-Pro-hle-Mcf-Phe-NH ₂
209	Ac-Phe-Cit-Hyp-hle-Bta-Phe-NH ₂
210	Ac-Phe-Cit-Pro-cha-Bta-Phe-NH ₂
211	Ac-Phe-Cit-Pro-hle-Bta-Phe-NH ₂
212	Ac-Phe-Cit-Ser-hle-Bta-Phe-NH ₂
213	Ac-Phe-Dab-Aze-cha-Bta-Phe-NH ₂
214	Ac-Phe-Dab-Aze-hle-Bta-Phe-NH ₂
215	Ac-Phe-Dab-Pro-cha-Bta-Phe-NH ₂
216	Ac-Phe-Dap-Pro-cha-Bta-Phe-NH ₂
217	Ac-Phe-Ech-Pro-cha-Bta-Phe-NH ₂
218	Ac-Phe-Eep-Pro-cha-Bta-Phe-NH ₂
219	Ac-Phe-Fcn-Aze-cha-Bta-Phe-NH ₂
220	Ac-Phe-Fcn-Pro-cha-Bta-Phe-NH ₂
221	Ac-Phe-Fco-Pro-cha-Bta-Phe-NH ₂
222	Ac-Phe-Fco-Pro-cha-Bta-Phe-NH ₂
223	Ac-Phe-Fcp-Aze-cha-Bta-Phe-NH ₂
224	Ac-Phe-Ffa-Aze-cha-Bta-Phe-NH ₂
225	Ac-Phe-Ffa-Pro-cha-Bta-Phe-NH ₂
226	Ac-Phe-Ffa-Pro-hle-Bta-Phe-NH ₂
227	Ac-Phe-G23-Pro-cha-Bta-Phe-NH ₂
228	Ac-Phe-Guf-Pro-cha-Bta-Phe-NH ₂
229	Ac-Phe-Har-Aze-cha-Bta-Phe-NH ₂
230	Ac-Phe-His-Pro-cha-Bta-Phe-NH ₂
231	Ac-Phe-L22-Pro-cha-Bta-Phe-NH ₂
232	Ac-Phe-OrA-Pro-cha-Bta-Phe-NH ₂
233	Ac-Phe-OrE-Pro-cha-Bta-Phe-NH ₂
234	Ac-Phe-Orn-Aze-hle-Bta-Phe-NH ₂
235	Ac-Phe-Orn-Chy-cha-Bta-Phe-NH ₂
236	Ac-Phe-Orn-Chy-hle-Pff-Phe-NH ₂
237	Ac-Phe-Orn-G24-cha-Bta-Phe-NH ₂
238	Ac-Phe-Orn-G25-cha-Bta-Phe-NH ₂
239	Ac-Phe-Orn-G26-cha-Bta-Phe-NH ₂

240	Ac-Phe-Orn-G27-cha-Bta-Phe-NH ₂
241	Ac-Phe-Orn-G30-cha-Bta-Phe-NH ₂
242	Ac-Phe-Orn-G31-cha-Bta-Phe-NH ₂
243	Ac-Phe-Orn-Hse-cha-Bta-Phe-NH ₂
244	Ac-Phe-Orn-Hyp-hle-Bta-Phe-NH ₂
245	Ac-Phe-Orn-Hyp-hle-Pff-Phe-NH ₂
246	Ac-Phe-Orn-NMA-cha-Bta-Phe-NH ₂
247	Ac-Phe-Orn-NMS-cha-Bta-Phe-NH ₂
248	Ac-Phe-Orn-Pro-cha-1Ni-Phe-NH ₂
249	Ac-Phe-Orn-Pro-cha-Bta-1Ni-NH ₂
250	Ac-Phe-Orn-Pro-cha-Bta-Bhf-NH ₂
251	Ac-Phe-Orn-Pro-cha-Bta-Dff-NH ₂
252	Ac-Phe-Orn-Pro-cha-Bta-Eaa-NH ₂
253	Ac-Phe-Orn-Pro-cha-Bta-L19
254	Ac-Phe-Orn-Pro-cha-Bta-Mcf-NH ₂
255	Ac-Phe-Orn-Pro-cha-Bta-Mff-NH ₂
256	Ac-Phe-Orn-Pro-cha-Bta-NH-CH(CH ₂ OH)-CH ₂ -Ph
257	Ac-Phe-Orn-Pro-Cha-Bta-NH-NBn-CO-NH ₂
258	Ac-Phe-Orn-Pro-cha-Bta-Opa-NH ₂
259	Ac-Phe-Orn-Pro-cha-Bta-Pcf-NH ₂
260	Ac-Phe-Orn-Pro-cha-Bta-Pmf-NH ₂
261	Ac-Phe-Orn-Pro-cha-Bta-Thi-NH ₂
262	Ac-Phe-Orn-Pro-cha-Otf-Phe-NH ₂
263	Ac-Phe-Orn-Pro-ctb-Bta-Phe-NH ₂
264	Ac-Phe-Orn-Pro-ctb-Eaa-Phe-NH ₂
265	Ac-Phe-Orn-Pro-ctb-Mcf-Phe-NH ₂
266	Ac-Phe-Orn-Pro-ctb-Pff-Phe-NH ₂
267	Ac-Phe-Orn-Pro-hch-Trp-Phe-OH
268	Ac-Phe-Orn-Pro-hle-1Ni-Phe-NH ₂
269	Ac-Phe-Orn-Pro-hle-6FW-Phe-NH ₂
270	Ac-Phe-Orn-Pro-hle-Bta-1Ni-NH ₂
271	Ac-Phe-Orn-Pro-hle-Bta-2Ni-NH ₂
272	Ac-Phe-Orn-Pro-hle-Bta-5Ff-NH ₂

273	Ac-Phe-Orn-Pro-hle-Bta-Aic-NH ₂
274	Ac-Phe-Orn-Pro-hle-Bta-Cha-NH ₂
275	Ac-Phe-Orn-Pro-hle-Bta-Chg-NH ₂
276	Ac-Phe-Orn-Pro-hle-Bta-Eaa-NH ₂
277	Ac-Phe-Orn-Pro-hle-Bta-Egy-NH ₂
278	Ac-Phe-Orn-Pro-hle-Bta-Pcf-NH ₂
279	Ac-Phe-Orn-Pro-hle-Bta-Pff-NH ₂
280	Ac-Phe-Orn-Pro-hle-Bta-Phe-NH ₂
281	Ac-Phe-Orn-Pro-hle-Bta-phe-OH
282	Ac-Phe-Orn-Pro-hle-Bta-Tyr-NH ₂
283	Ac-Phe-Orn-Pro-hle-Dff-Phe-NH ₂
284	Ac-Phe-Orn-Pro-hle-Eaa-Phe-NH ₂
285	Ac-Phe-Orn-Pro-hle-Egc-Phe-NH ₂
286	Ac-Phe-Orn-Pro-hle-Egy-Phe-NH ₂
287	Ac-Phe-Orn-Pro-hle-Egz-Phe-NH ₂
288	Ac-Phe-Orn-Pro-hle-Mcf-2Ni-NH ₂
289	Ac-Phe-Orn-Pro-hle-Mcf-Cha-NH ₂
290	Ac-Phe-Orn-Pro-hle-Mcf-Pff-NH ₂
291	Ac-Phe-Orn-Pro-hle-Mcf-Phe-NH ₂
292	Ac-Phe-Orn-Pro-hle-Mff-Phe-NH ₂
293	Ac-Phe-Orn-Pro-hle-Mmy-Phe-NH ₂
294	Ac-Phe-Orn-Pro-hle-Ocf-Phe-NH ₂
295	Ac-Phe-Orn-Pro-hle-Off-Phe-NH ₂
296	Ac-Phe-Orn-Pro-hle-Otf-Phe-NH ₂
297	Ac-Phe-Orn-Pro-hle-Pff-2Ni-NH ₂
298	Ac-Phe-Orn-Pro-hle-Pff-Cha-NH ₂
299	Ac-Phe-Orn-Pro-hle-Pff-Eaa-NH ₂
300	Ac-Phe-Orn-Pro-hle-Pff-Mmy-NH ₂
301	Ac-Phe-Orn-Pro-hle-Pff-Pff-NH ₂
302	Ac-Phe-Orn-Pro-hle-Pff-Phe-NH ₂
304	Ac-Phe-Orn-Pro-hle-Phe-Phe-NH ₂
305	Ac-Phe-Orn-Pro-hle-Tff-Phe-NH ₂
306	Ac-Phe-Orn-Pro-hle-Trp-Phe-NH ₂

307	Ac-Phe-Orn-Pro-ile-Trp-Phe-NH ₂
308	Ac-Phe-Orn-Pro-omf-Bta-Phe-NH ₂
309	Ac-Phe-Orn-Ser-cha-Bta-Phe-NH ₂
310	Ac-Ser-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
311	Ac-Thi-[Orn-Pro-hle-Bta-Phe]
312	Ac-Thi-Orn-Pro-cha-Bta-Phe-NH ₂
313	Ac-Thi-Orn-Pro-cha-Bta-Thi-NH ₂
314	Ac-Thr-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
315	Bzl-[Orn-Pro-cha-Bta-Nle]
316	CH ₃ CH ₂ CO-Phe-Orn-Pro-cha-Bta-Phe-NH ₂
317	Def-[Orn-Ser-hle-Trp-Nle]
318	Eby-Phe-[Orn-Hyp-cha-Trp-Phe]
319	Eth-Phe-[Orn-Pro-hle-Pff-Nle]
320	FAc-Phe-Fib-Aze-cha-Bta-Phe-NH ₂
321	FAc-Phe-Orn-Aze-cha-Bta-Phe-NH ₂
322	FAc-Phe-Orn-Pro-cha-Bta-Phe-NH ₂
323	Fai-Phe-[Orn-Hyp-cha-Trp-Phe]
324	Faz-Orn-Pro-cha-Bta-Phe-NH ₂
325	Fbi-Phe-[Orn-Pro-cha-Trp-Nle]
326	Fbn-Phe-[Orn-Hyp-cha-Trp-Phe]
327	Fbn-Phe-[Orn-Pro-cha-Trp-Nle]
328	Fbn-Phe-[Orn-Pro-cha-Trp-Nle]
329	Fbn-Phe-Cit-Pro-hle-Bta-Phe-NH ₂
330	Fbo-Phe-[Orn-Pro-cha-Trp-Nle]
331	Fbp-[Orn-Pro-cha-Trp-Nle]
332	Fci-[Phe-Orn-Hyp-cha-Trp-Phe]
333	Fck-[Phe-Orn-Pro-cha-Trp-Nle]
334	Fck-Phe-[Orn-Pro-cha-Trp-Nle]
335	Fha-Phe-[Orn-Hyp-cha-Trp-Phe]
336	Fhb-[Phe-Orn-Hyp-cha-Trp-Phe]
337	Fhi-Phe-[Orn-Hyp-cha-Trp-Phe]
338	Fhu-Phe-[Orn-Pro-hle-Pff-Nle]
339	Fhu-Phe-Orn-Pro-cha-Bta-Phe-NH ₂

340	Fid-Phe-Orn-Pro-cha-Bta-Phe-NH ₂
341	H-Amf-[Orn-Aze-hle-Pff-Nle]
342	H-Bal-Phe-[Orn-Hyp-hle-Trp-Nle]
343	H-Bal-Phe-[Orn-Pro-hle-Pff-Nle]
344	H-Eby-[Orn-Hyp-hle-Trp-Nle]
345	H-Gly-Phe-Orn-Pro-cha-Bta-Phe-NH ₂
346	H-Nip-Phe-Cit-Pro-hle-Bta-Phe-NH ₂
347	Hoo-Phe-[Orn-Hyp-hle-Pff-Nle]
348	Hoo-Phe-Cit-Pro-hle-Pff-Phe-NH ₂
349	Hoo-Phe-Orn-Hyp-hle-Pff-Phe-NH ₂
350	Hoo-Phe-Orn-Pro-hle-Bta-Phe-NH ₂
351	Hoo-Phe-Orn-Pro-hle-Mcf-Phe-NH ₂
352	Hoo-Phe-Orn-Pro-hle-Pff-Phe-NH ₂
353	H-Phe-[Lys-Hyp-hle-Pff-Nle]
354	H-Phe-[Orn-Hym-hle-Mcf-Nle]
355	H-Phe-[Orn-Hym-hle-Pff-Phe]
356	H-Phe-[Orn-Hyp-cha-Trp-Nle]
357	H-Phe-[Orn-Hyp-cha-Trp-Phe]
358	H-Phe-[Orn-Hyp-ctb-Pff-Nle]
359	H-Phe-[Orn-Hyp-ctb-Trp-Nle]
360	H-Phe-[Orn-Hyp-ctb-Trp-Phe]
361	H-Phe-[Orn-Hyp-hle-Mcf-Leu]
362	H-Phe-[Orn-Hyp-hle-Pff-Chg]
363	H-Phe-[Orn-Hyp-hle-Pff-Hle]
364	H-Phe-[Orn-Hyp-hle-Pff-Leu]
365	H-Phe-[Orn-Hyp-hle-Pff-Nle]
366	H-Phe-[Orn-Hyp-hle-Pff-Phe]
367	H-Phe-[Orn-Hyp-hle-Trp-Hle]
368	H-Phe-[Orn-Hyp-hle-Trp-Leu]
369	H-Phe-[Orn-Hyp-hle-Trp-Nle]
370	H-Phe-[Orn-Hyp-hle-Trp-Nva]
371	H-Phe-[Orn-Hyp-hle-Trp-Phe]
372	H-Phe-[Orn-NMS-cha-Trp-Nle]

373	H-Phe-[Orn-NMS-hle-Pff-Phe]
374	H-Phe-[Orn-Pro-cha-Pff-Nle]
375	H-Phe-[Orn-Pro-cha-Pff-Phe]
376	H-Phe-[Orn-Pro-cha-Trp-Nle]
377	H-Phe-[Orn-Pro-hle-Mcf-Phe]
378	H-Phe-[Orn-Pro-hle-Ocf-Phe]
379	H-Phe-[Orn-Pro-hle-Pff-Nle]
380	H-Phe-[Orn-Pro-hle-Pff-Phe]
381	H-Phe-[Orn-Pro-hle-Trp-Nle]
382	H-Phe-[Orn-Ser-cha-Trp-Nle]
383	H-Phe-[Orn-Ser-cha-Trp-Phe]
384	H-Phe-[Orn-Ser-hle-Eaa-Nle]
385	H-Phe-[Orn-Ser-hle-Mcf-Leu]
386	H-Phe-[Orn-Ser-hle-Ocf-Nle]
387	H-Phe-[Orn-Ser-hle-Pff-Leu]
388	H-Phe-[Orn-Ser-hle-Pff-Nle]
389	H-Phe-[Orn-Ser-hle-Pff-Phe]
390	H-Phe-[Orn-Ser-hle-Trp-Nle]
391	H-Phe-Cit-Pro-hle-Bta-Phe-NH ₂
392	Ohf-[Orn-Hyp-hle-Trp-Nle]
393	Tmg-Phe-[Orn-Hyp-cha-Trp-Phe]

45. A pharmaceutical composition comprising at least one compound according to any of the preceding claims and additionally a pharmaceutically acceptable carrier.

46. Use of at least one of the compounds according to one of the preceding claims for the manufacture of a medicament.

47. Use according claim 46, characterized in that the medicament is used for the prevention and/or treatment of a condition associated with complement activation and/or where the inhibition of the complement system leads to a relief of the symptoms.

48. Use according to claim 46, characterized in that the medicament is used for the prevention and/or treatment of a condition where the inhibition of the C5a receptor alone or in combination with other therapeutics leads to a relief of the symptoms.
49. Use according to any of claims 46, 47, or 48, characterized in that the condition and/or the symptoms to be treated are selected from the group comprising autoimmune diseases, acute inflammatory diseases, trauma, local inflammations, shock and burn.
50. Use according to claim 49, characterized in that the condition is selected from the group comprising rheumatoid arthritis, ankylosis spodylitis, sarcoidosis, systemic lupus erythematosus, multiple sclerosis, psoriasis, septic shock, haemorrhagic shock, systemic inflammatory response syndrome (SIRS), multiple organ failure (MOF), asthma, vasculitis, myocarditis, dermatomyositis, inflammatory bowel disease (IBD), pemphigus, myasthenia gravis, glomerulonephritis, acute respiratory insufficiency, stroke, myocardial infarction, reperfusion injury, neurocognitive dysfunction, anti-phospholipid syndrome, burn, inflammatory diseases of the eye, local manifestations of systemic diseases, inflammatory diseases of the vasculature, and acute injuries of the central nervous system.
51. Use according to claim 50, characterized in that the inflammatory disease of the eye is selected from the group comprising uveitis, age-related macular degeneration, diabetic retinopathy, diabetic macular edema, ocular pemphigoid, keratoconjunctivitis, Stevens-Johnson syndrome, and Graves ophthalmopathy.
52. Use according to claim 50, characterized in that the condition is a local manifestation of a systemic disease, whereby the systemic disease is selected from the group comprising rheumatoid arthritis, SLE, type I diabetes, and type II diabetes.
53. Use according to claim 52, characterized in that the manifestations are selected from the group comprising manifestations at the eye, at or in the brain, at the vessels, at the heart, at the lung, at the kidneys, at the liver, at the gastro-intestinal tract, at the spleen, at the skin, at the skeletal system, at the lymphatic system, and in the blood.

54. Use according to claim 50, characterized in that the inflammatory disease of vasulature is selected from the group comprising vasculitis, vascular leakage, and atherosclerosis.
55. Use of at least one compound according to any of the preceding claims for the prevention and/or support of surgery, especially for the manufacture of a medicament for such purpose.
56. Use according to any of claims 46 to 55, characterized in that the medicament is used for the prevention and/or the support of surgery.
57. Use according to any of claims 46 to 55, characterized in that the medicament is used for the prevention and/or support and/or post-operative treatment of a surgery, whereby the surgery is selected from the group comprising CABG, PACT, PTA, MidCAB, OPCAB, thrombolysis, organ transplantation, and vessel clamping.
58. Use according to any of claims 46 to 55, whereby the medicament is used for thrombolytic treatment.
59. Use according to any of claims 46 to 55, characterized in that the medicament is used in the settings of dialysis therapy, optionally before, during, and/or after such therapy.
60. Use according to any of claims 46 to 55, characterized in that the medicament is used for the prevention of organ damage of a transplanted organ or of an organ to be transplanted.
61. Use according to any of claims 46 to 55, characterized in that the medicament is used for the prevention or treatment of transplant rejection.